

What is claimed is:

1. A method for managing system resources required for communication between a source device and a sink device in a network system in which a digital interface is used for connection between the source device and the sink device, the method comprising the steps of:

(a) allocating to the source device system resources presently required for commencement of communication between the source device and the sink device, wherein the allocating is performed by the sink device;

T_3, L_1

(b) monitoring at the source device a format of the output bit stream of the source device while communications are being maintained between the source device and the sink device to determine if requirements for the system resources have changed;

(c) allocating at the source device additional system resources to the source device or releasing at the source device redundant system resources from the source device, if it is determined as a result of monitoring that the requirements for the system resources have changed; and

(d) detecting at the sink device final system resources allocated for communication between the source device and the sink device and releasing at the sink device the detected final system resources, when communication between the source device and the sink device is terminated.

P_{42}, L_{15}

2. The method of claim 1, wherein the step (c) further comprises recording at the source device information regarding a change in requirements for the system resources in a predetermined storage location of the source device, and, the step (d) further comprises detecting final system resources at the sink device based on

the information recorded in the predetermined storage location of the source device.

3. The method of claim 2, wherein the predetermined storage location is an output plug control register which is defined according to an IEC61883 standard, which defines management of connections between digital devices in an IEEE1394 network system, wherein the step (c) further comprises updating a payload field of the output plug control register based on a bandwidth of the output bit stream when the bandwidth, which is initially allocated as one of the system resources in the step (a), is changed.

4. A method for managing system resources required for communication between a source device and a sink device in a network system in which a digital interface is used for connection between the source device and the sink device, the method comprising the steps of:

(a) allocating to the source device system resources presently required for commencement of communication between the source device and the sink device, wherein the allocating is performed by the sink device;

(b) monitoring at the source device a format of the output bit stream of the source device while communications are being maintained between the source device and the sink device to determine if requirements for the system resources have changed;

(c) informing the sink device of the change in the requirements for the system resources if it is determined as a result of monitoring that the requirements for the system resources have changed;

(d) allocating additional system resources to the source device or releasing redundant system resources from the source device, at the

sink device if it is determined as a result of monitoring that the
20 requirements for the system resources have changed; and
(e) detecting at the sink device final system resources and
releasing at the sink the detected system resources when
communication between the source device and the sink device is
terminated.

5. The method of claim 4, wherein the step (e) further
comprises determining if communication between the source and sink
devices has been terminated.

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6. The method of claim 4, wherein the step (c) further
comprises recording at the source device information regarding the
change in the requirements for the system resources in a
predetermined storage location of the source device, the step (d)
5 further comprises reading at the sink device the information regarding
the change in the requirements for the system resources from the
predetermined storage location of the source device, and the step (e)
further comprises detecting the final system resources at the sink
device based on the information recorded in the predetermined storage
10 location.

7. The method of claim 6, wherein the predetermined
storage location is an output plug control register which is defined
according to an IEC61883 standard, which defines management of
connections between digital devices in an IEEE1394 network system,
5 wherein a payload field of the output plug control register is updated
based on a bandwidth of the output bit stream when the bandwidth,

which is initially allocated as one of the system resources in the step (a), is changed.